

REMARKS

The rejections under 35 U.S.C. § 103(a) of Claims 17, 18, 20 and 30 as unpatentable over JP03118319A2 (Mimura et al) in view of U.S. 4,220,653 (Vivino), and of Claims 21, 22, 24-26, and 28-30 as unpatentable over Mimura et al in view of Vivino, and further in view of JP2001-046051A (Hirayama et al)<sup>1</sup>, are respectfully traversed.

The present invention is drawn to a method of treating or suppressing obesity in a subject, comprising administering to the subject an anti-obesity agent which comprises either D-cysteinolic acid represented by Formula I in Claim 17 (Claims 17-20), sea lettuce or an extract therefrom (Claims 21-24); or an extract from sea lettuce obtained with water at a temperature of 50-70°C (Claims 25-28); or at least any one of D-cysteinolic acid, sea lettuce, and an extract thereof (Claim 30).

Mimura et al discloses, as gastric juice-secretion inhibitors, derivatives of cysteinolic acid that includes even cysteinol itself. The full text of Mimura et al describes the pharmaceutical activity and mechanism for a particular compound disclosed in Mimura et al under a "Experimental Examples" section, i.e., [(R)-2-aminopropyl]disulfide (Me-SS). This compound has the formula  $\text{NH}_2\text{-CH}(\text{CH}_3)\text{-CH}_2\text{-S-S-CH}_2\text{-CH}(\text{CH}_3)\text{-NH}_2$ . This is the only compound for which pharmaceutical activity has been confirmed in Mimura et al. Cysteinolic acid includes a sulfonic acid group, whereas Me-SS includes a disulfide bond. These compounds are clearly different from each other. In the present invention, the presence of the sulfonic acid group is believed to serve an important role, and this compound can be contrasted with Me-SS. Moreover, the fact that Me-SS has a gastric juice secretion suppressing effect does not at all suggest that cysteinol itself has the same pharmaceutical effect. Nor does Mimura et al disclose or suggest that cysteinolic acid has an effect of treating or suppressing obesity.

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<sup>1</sup> The Examiner incorrectly lists JP2001-046051A as JP2001-04601A in the rejection.

The Examiner relies on Vivino as disclosing that gastric juice secretion inhibitors are used to treat obesity, relying on the disclosure therein at column 2, lines 7-24. In reply, Vivino discloses that gastric juice secretion inhibitors act to reduce a feeling of hunger which overweight persons experience when they consume smaller meals than those to which they have been accustomed. In other words, gastric juice secretion inhibitors act to cause subjects to eat less food. This is different from suppressing or treating obesity. Indeed, based on the *in vivo* data in the specification demonstrating the effectiveness of the above-discussed active ingredients, the anti-obesity effect was not based on a lesser consumption of food.

The Examiner relies on Hirayama et al as disclosing that D-cysteinolic acid is contained in sea lettuce and can be extracted using hot water. But even if the cysteinolic acid of Mimura et al were obtained as disclosed by Hirayama et al, the result would still not be the presently-claimed invention.

For all the above reasons, it is respectfully requested that the rejections over prior art be withdrawn.

The rejection of Claims 17-30 under 35 U.S.C. § 112, first paragraph, as failing to provide enablement for prevention of obesity, is respectfully traversed. Indeed, the rejection is now moot in view of the above-discussed amendment. Accordingly, it is respectfully requested that it be withdrawn.

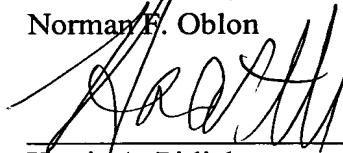
The rejection of Claims 25-28 under 35 U.S.C. § 112, second paragraph, is respectfully traversed. Indeed, the rejection is now moot in view of the above-discussed amendment. Accordingly, it is respectfully requested that it be withdrawn.

All of the presently-pending claims in this application are now believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Respectfully submitted,

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